

## Toothbrush has vibratory drive for brush head and water flush feed to irrigate mouth

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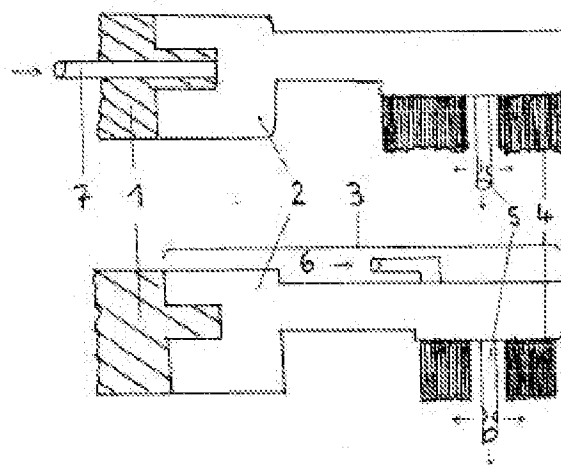
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### Abstract of **FR 2789887 (A1)**

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The toothbrush has a vibratory drive operated by the brush handle (2). The bristles (4) define a central space to receive an irrigation tube (5) longer than the bristles to allow penetration into the interdental space. The water is pumped through the tube as the brush is operated.



The present invention associates an interdental vibrational irrigation the current brushings.

The conventional brushing, does not intervene with the interdental level, which constitutes in fact, the most vulnerable area of the gingival tie of the tooth. Interdental apparatuses exist but they are ignored or galvaudés, perhaps because of their delicate use.

The brush in accordance with the invention, adaptable on an electric toothbrush with rotary movement or transverse (nonrestrictive), by associating the brushing the interdental irrigation, but especially by adding its vibrational component, creates a true synergy. The stem of irrigation allows an easy access interdental space in order to bring there the vibrational component, which can be induced by the single vibrative movement of the electric toothbrush.

According to modes particular of realization:

- the brush is encased on an electric toothbrush by its handle.
- the sleeve of the brush transmits the vibrative movement to the head of the brush.
- the water supply provides the stem of irrigation.
- the fibres of the brush spare a central space o" places the stem of irrigation.

As the annexed drawings illustrate the invention: In reference with these drawings, the brush adapts to an electric toothbrush (1) by

the intermediate one of its handle (2), which transmits its vibrative movement to him.

This movement, transmitted to the head of the brush, is generating of a true synergy of therapeutic actions, namely the pure brushing thanks to the fibres (4) of the brush and o the vibrational irrigation thanks to the stem of irrigation (5).

The vibrational irrigation consists of an ultrasonic cleaning of type of space interdental coupled with the washing of this space freshly cleaned.

The water supply can be done either with the level of the head of the brush (6), or by the sleeve of the brush (7), with the required pressure (the diameter terminal of the stem of irrigation 1.S foam, to avoid any wound, will be of approximately 1 mm) and the projection of water is done with the level terminal of the stem of irrigation like laterally.

The stem of irrigation (5) being longer than the height of fibres (4) that makes it possible the brush to be perfectly fixed in the interdental space and thus gradually of

to be used as rail with the brushing, drawing a marked out course of interdental spaces.

The stem of irrigation (5) central and prominent, shouldered by the fibres (4) surrounding it perforates the interdental, responsible anaerobic bubble inflammatory of the gingival pathology, and as an arrow it can reach “the epicentre” of this bubble -2 - inflammatory. Moreover, the brushing with interdental vibrational irrigation makes it possible to tackle face the 4 pillars of 1 ' ignition: redness, heat, pain and tumefaction. A fresh irrigation (provided that teeth are free of caries; in which case it

S will play a diagnostic role) can calm heat and pain. The vibrational action irrigation can alleviate tumefaction.

One can plan to study a chromatic action on this redness. One can also plan to associate therapeutic adjuvants the solution of irrigation.

Therefore, the association of the conventional brushing to the vibrational irrigation, constitutes a new therapeutic synergy completely remarkable. The brushing is not only any more mechanical but becomes finally therapeutic.

Oral hygiene with daily takes another face.

## CLAIMS

1) The brush with interdental vibrational irrigation (3) adaptable on an electric toothbrush (1) characterized in what it comprises a stem of irrigation (5) placed in a space spared at the center of the fibres (4) of the brush, which introduced in the middle of an interdental space allows a true synergy between a conventional brushing and one

S irrigation interdental vibrational, favourable with an interdental cleaning.

2) The brush according to characterized claim 1 in what the stem of irrigation (5) is longer than the fibres (4), wedge perfectly with the level of the interdental crossroads, and is used as guide of brushing, suggesting a course of brushing. Moreover this stem of irrigation supported by fibres surrounding it, perforates the anaerobic inflammatory bubble

Ao. interdental responsible of the gingival pathology.

3) The characterized brush according to any of the previous claims in it

that the projection of water is done with the level terminal (foam) of the stem of irrigation (5) like laterally (5), allowing a washing of space interdental and making it possible to tackle face the 4 pillars of the ignition: redness, heat, pain and

With; tumefaction.

